

# PETER DILLERY

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## EMPLOYMENT

**University of Bonn**  
Research Assistant  
**University of Maryland, College Park**  
Brin Postdoctoral Fellow

Bonn, Germany  
October 2025-Present  
College Park, MD  
2022-2025

## EDUCATION

**University of Michigan**  
PhD in Mathematics  
**University of Virginia**  
B.A. in Mathematics, GPA 4.0

Ann Arbor, MI  
August 2022  
Charlottesville, VA  
June 2017

## PAPERS AND PREPRINTS

1. *A global version of Fargues' construction over function fields* (in progress)
2. *A Tannakian description of the local Kaletha gerbe* (joint with Alexander Bertoloni Meli).  
<https://arxiv.org/abs/2601.07042>
3. *Vector bundles on cones over a Fargues-Fontaine curve* (with Kiran Kedlaya). (preprint)  
<https://kskedlaya.org/papers/affine-cone.pdf>
4. *Non-basic rigid packets for discrete L-parameters* (with David Schwein). (preprint)  
<https://arxiv.org/pdf/2408.13908>
5. *Isocrystals and limits of rigid local Langlands correspondences.* (preprint)  
Accepted at **Algebra and Number Theory**,  
<https://arxiv.org/abs/2312.09195>
6. *A stacky generalized Springer correspondence and rigid enhancements of L-parameters* (with David Schwein). (preprint)  
Under revision at **Journal of the Institute of Mathematics of Jussieu**,  
<https://arxiv.org/abs/2308.11752>
7. *Rigid inner forms over global function fields.*  
**Journal of the Institute of Mathematics of Jussieu**, 2025.  
<https://arxiv.org/abs/2110.10820>
8. *Rigid inner forms over local function fields.*  
**Advances in Mathematics**, 2023.  
<https://arxiv.org/abs/2008.04472>
9. *The canonical join complex for biclosed sets.* (joint with A. Clifton and A. Garver)[Research done as undergraduate].  
**Algebra Universalis**, 2018.
10. *Minimal-length maximal Green sequences and triangulations of polygons.* (joint with E. Cormier, K. Serhiienko, J. Resh, and J. Whelan)[Research done as undergraduate].  
**Journal of Algebraic Combinatorics**, 2016.

## SERVICE AND OUTREACH

- University of Bonn
  - Co-organizer of “Learning workshop on metaplectic covers” (working title) (Spring 2026)
- University of Maryland
  - Co-organized number theory and representation theory seminar (Fall 2023-May 2025)
  - Co-organizer for Brin Center workshop “Geometric Approaches to the Local Langlands Program” (\$40,00 budget, March 2025)
  - DC Math Circle (Fall 2024–Present): Taught mathematical enrichment classes to middle-schoolers in the DC area
  - Co-organized RIT seminar on “The stack of Langlands parameters (Spring 2024)
  - Provided lessons for DEI STEM repository at Indiana University Social Roles Laboratory (<https://socialroles.lab.indiana.edu/index.html>) (Spring 2024)
  - Reviewer for MathSciNet (Fall 2023-present)
  - Co-organized Lie groups and representation theory seminar (Fall 2022-Spring 2023)
  - Organized UMD number theory lunch (Spring 2023-Spring 2024)
- University of Michigan
  - Co-supervised project for Michigan REU (Summer 2022)
  - Michigan Math Corps (Fall 2020-Spring 2021): Math outreach/mentoring program for middle-schoolers in Ypsilanti

- Michigan Math Circle (Fall 2019): Taught mathematical enrichment classes to Ann Arbor middle-schoolers
- Co-organizer for student arithmetic geometry learning seminar (Fall 2019)
- Organizer for graduate student and postdoc number theory happy hour (Fall 2020-Spring 2021)

## RESEARCH SUPERVISION

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- Victor Hernandez Macias, *A modification of Kaletha's gerbe*, Master's thesis at University of Bonn, Fall 2025-present
- Nir Elber, *Representations of Galois gerbes*, Summer REU at UofM, Summer 2022

## AWARDS

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- Rackham Pre-doctoral Fellowship (Fall 2021-Spring 2022)

## TEACHING

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### **University of Maryland, College Park**

*Instructor of record*

- Math 403, Abstract Algebra (Spring 2025)
- Math 405, Abstract Linear Algebra (Fall 2024)
- Math 406, Number Theory (Fall 2022, Spring 2023, Spring 2024)
- Math 120, Business Calculus I [220-person lecture] (Fall 2023)

### **College Park, MD**

Fall 2022- May 2025

### **University of Michigan**

*Graduate Student Instructor (GSI)—instructor of record*

- Math 116, Calculus II [Primary instructor] (Fall 2019, Fall 2020)
- Math 115, Calculus I [Primary instructor] (Fall 2017-Spring 2019)

### **Ann Arbor, Mi**

Fall 2017- Spring 2022

## SELECTED INVITED TALKS GIVEN (OR TO BE GIVEN) IN SEMINARS AND CONFERENCES

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- Algebraic Geometry and Number Theory Seminar. Chalmers University, Gothenberg, Sweden. Spring 2026 (Date TBA)
- University of Sheffield Number Theory Seminar. University of Sheffield, Sheffield, UK. December, 2025.
- Canadian Rockies Representation Theory Seminar. University of Calgary. April, 2025.
- Texas Christian University Mathematics Colloquium. April, 2025.
- Séminaire d'arithmétique à l'UMPA de Lyon (ENS Lyon). January, 2025.
- Séminaire Groupes Réductifs et Formes Automorphes, Institut de Mathématiques de Jussieu - Paris Rive Gauche. January, 2025.
- Oberseminar Arithmetische Geometrie und Darstellungstheorie - Max Planck Institute of Mathematics, Bonn, Germany. January, 2025.
- Mini Workshop on Arithmetic and Representations. Yau Mathematical Sciences Center (Tsinghua University), Beijing, China. December, 2024.
- Ramanujan-Serre (Number Theory) Seminar. University of Virginia. November, 2024.
- MIT Lie Groups Seminar. October, 2024.
- Boston College Number Theory/Representation Theory Seminar. October, 2024
- Duke University Number Theory Seminar. October, 2024
- American University Mathematics and Statistics Colloquium. September, 2024
- University of Maryland Number Theory/Representation Theory Seminar, September, 2024
- The Graduate Center (CUNY) Arithmetic Geometry Seminar. March, 2024.
- University of Arizona Number Theory Seminar. April, 2024
- Johns Hopkins Number Theory Seminar. December, 2023.
- University of Maryland Number Theory/Representation Theory Seminar. November, 2023.
- Johns Hopkins Number Theory Seminar. October, 2022.
- University of Maryland Lie Groups and Representation Theory Seminar. September, 2022.
- University of Copenhagen Number Theory Seminar (2 talks). June, 2022.
- MIT Lie Groups Seminar. May, 2022.
- Ramanujan-Serre (Number Theory) Seminar. University of Virginia. March, 2022.
- Junior Number Theory Days. Johns Hopkins. December, 2021.
- Automorphic Project and Research Seminar. October, 2021.
- University of Michigan Number Theory RTG Seminar. September, 2021.
- University of Michigan Number Theory RTG Seminar. August, 2020.

## LANGUAGES

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English—fluent, Spanish—Fluent reading and advanced speaking, French—fluent reading and intermediate speaking